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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,789	06/24/2003	Norio Kimura	2003-0865	9516

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EXAMINER

SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,789

Applicant(s)

KIMURA ET AL.

Examiner

Hadi Shakeri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37,38,40,41 and 44-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 37,38,40,41 and 44-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 44-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 44, 47 and 48, the limitation "polishing table...substantially 1.5 times the diameter of the substrate" renders the claim(s) indefinite because the claim(s) include(s) structural limitations not actually disclosed (those encompassed by "the size of the wafer", e.g., is it 4", 6", 12"...?), thereby rendering the scope of the claim(s) unascertainable. While the Examiner might speculate as to what is meant by the claim language, the uncertainty provides the Examiner with no proper basis for making the comparison between that which is claimed and the prior art. Rejections under 35 U.S.C. § 103 should not be based upon considerable speculation as to the meaning of terms employed and assumptions as to the scope of the claims. *In re Steele*, 134 USPQ 292. When no reasonably definite meaning can be ascribed to certain terms in a claim, the subject matter does not become obvious, but rather the claim becomes indefinite. *In re Wilson*, 165 USPQ 494. **No art applied to claims 44-48 in view of the above 112 rejections.**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

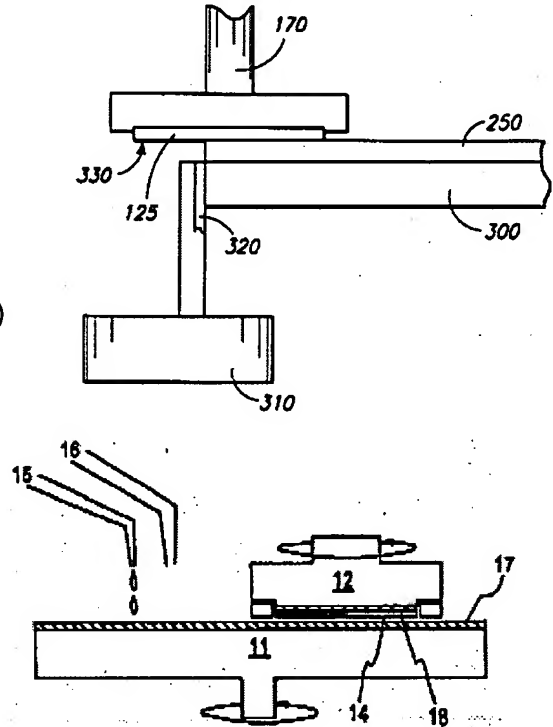
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Lenkersdorfer (6,213,844) in view of Watanabe et al. (5,951,368) and Osterheld (6,616,513).

Lenkersdorfer discloses all of the limitations of claims 36, 37, 40 and 43, i.e., a polishing table (300) having a polishing surface (250), a substrate carrier (170) having a lower surface for holding a substrate (125) and bringing the substrate into contact with said polishing surface, a liquid supply nozzle (not shown), and a film thickness measurement device (310) for determining an end point of the polishing and being positioned at an outer peripheral portion of the table, except for disclosing an attitude control mechanism for keeping the lower surface of the substrate carrier parallel with the polishing surface and a nozzle providing water to the pad.



Regarding water nozzle, Osterheld discloses that a typical polishing apparatus includes a water nozzle for rinsing the pad. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of Lenkersdorfer with the water nozzle as taught by Osterheld to rinse the pad.

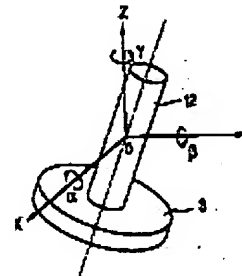
Watanabe et al. teaches polishing apparatus, which can control the attitude of the top ring with respect to a surface of a turntable of a polishing apparatus.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of Lenkersdorfer with the attitude control mechanism as taught by Watanabe et al. to provide a uniform polishing surface pressure across the entire

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polish surface. Note that the intended use and/or functional language, e.g., polishing both a first layer and a second layer in the polishing position, or limitation attributed to the workpiece, i.e. having two layers, do not further limit the apparatus, i.e., the apparatus is capable to practice the method.

Regarding claims 36-39 and 41 and 42, Lenkersdorfer as modified by Osterheld and Watanabe et al. meets all of the limitations, e.g., pivotal shaft rotatably supporting the carrier and a second nozzle (320) for supplying water to the wafer.



Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

6. Applicant's arguments filed 08/15/05 have been fully considered but they are not persuasive. The arguments that Lenkersdorfer does not entirely polish both layers while the wafer is maintained at the overhanged position through out the process by a thickness

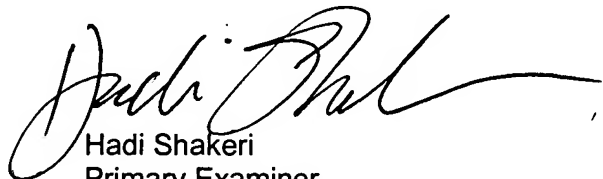
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measurement device positioned below the edge, while may be persuasive in a process claim are not persuasive regarding the apparatus claims, since the apparatus as disclosed by Lenkersdorfer includes structures and elements, e.g., pivotal shaft rotatably supporting the wafer for movement to and from the polishing position and thickness measurement device (310) positioned below the overhanged carrier, to provide for overhanging the wafer over the edge and for determining an end point, thus capable of meeting or performing the functions. The argument that the new claim recites a limitation for the polishing table is not persuasive either, because the apparatus is not positively limited, since the size of the table would depend on the wafer (e.g. a 4", 6" or 12") being polished.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 571-272-4495. The examiner can normally be reached on Monday-Thursday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri
Primary Examiner
Art Unit 3723
October 28, 2005